

Appl No 10/647,613
Amdt. dated April 10, 2006
Reply to Office Action of January 10, 2006

Amendments to the Specification

Please replace the paragraph beginning at line 12 of page 9 as follows:

In embodiments where different portions of elongate shaft or core 130 are made of different material, the different portions can be connected using any suitable connecting techniques. For example, the different portions of the elongate shaft or core 130 can be connected using welding, soldering, brazing, adhesive, or the like, or combinations thereof. Additionally, some embodiments can include one or more mechanical connectors or connector assemblies to connect the different portions of the elongate shaft or core 130 that are made of different materials. The connector may include any structure generally suitable for connecting portions of ~~[[a]]~~ an elongate shaft or core 130. One example of a suitable structure includes a structure such as a hyponube or a coiled wire which has an inside diameter sized appropriately to receive and connect the different portions of the elongate shaft or core 130. Some methods and structures that can be used to interconnect different shaft sections are disclosed in U.S. Patent Application Nos. 09/972,276, and 10/086,992, which are incorporated herein by reference.

Please replace the paragraph beginning at line 16 of page 15 as follows:

A coil-wire cross-section that moves material away from the x-axis without moving the same amount of material away from the centroid and y-axis will increase the torque-ability/flexibility ~~ratio~~ ratio of the coil. Increasing the moment of inertia about the x-axis of the cross-section of the coil-wire increases the torsional rigidity of the coil. Not increasing the polar moment of inertia about the centroid of the cross-section of the coil-wire as fast makes the coil more flexible. Thus, increasing the moment of inertia about the x-axis and not increasing the polar moment of inertia about the centroid as rapidly will provide a coil that efficiently transmits torque without sacrificing the flexibility of the coil. The moment of inertia about the x-axis can be 1% to 1000%, 10% to 500%, 20% to 300%, 20% to 200%, 50% to 100% greater than the moment of inertia about the y-axis. The moment of inertia about the x-axis can be 1%, 5%, 10%, 20%, 30%, 40%, 50%, 75%, 100%, 200%, 300%, 500%, 1000%, or 2000% greater than the moment of inertia about the y-axis.

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Please replace the paragraph beginning at line 16 of page 20 as follows:

A guidewire 1100 in accordance with some embodiments of the invention can optionally include a coating layer 1160 such as a lubricious coating layer over part or all of the guidewire assembly 1100 or even over part. Hydrophobic coatings such as fluoropolymers provide a dry lubricity which improves guide wire handling and device exchanges. Lubricious coatings improve steer-ability and improve lesion crossing capability. Suitable lubricious polymers are well known in the art and may include hydrophilic polymers such as polyarylene oxides, polyvinylpyrrolidones, polyvinylalcohols, hydroxy alkyl celluloses, algin, saccharides, caprolactones, and the like, and mixtures and combinations thereof. Hydrophilic polymers may be blended among themselves or with formulated amounts of water insoluble compounds (including some polymers) to yield coatings with suitable lubricity, bonding, and solubility. In some embodiments, the more distal portion 1132 of the guidewire is coated with a hydrophilic polymer and the more proximal portion 1131 is coated 1160 with a fluoropolymer, such as ~~polytetrafluoroethylene~~ polytetrafluoroethylene (PTFE).